

Applicant: Johnson Lin

Application No.: 09/822,875

REMARKS/ARGUMENTS

After the foregoing amendment, claims 1-20 are pending in this application. Claims 1-12, 14 and 15 have been amended to clarify the claim language and to correct several grammatical errors. The Applicant submits that no new matter has been added to the application by the amendment.

Claim Objections

Claims 6 and 10 are objected due to the occurrence of informalities in the claims. Claim 6 has been amended to be dependent upon claim 5. Thus there is now antecedent basis for the phrases "said second device" and "said second frequency". Claim 10 has been amended to be dependent upon claim 9. Thus there is now antecedent basis for the phrases "said third device" and "said third frequency".

The withdrawal of the objection to claims 6 and 10 is respectfully requested.

Claim Rejections - 35 USC § 112

Claim 12 is rejected under 35 U.S.C. § 112, second paragraph, as failing to set forth the subject matter which applicant(s) regard as their invention. The original claim 12 recited that the error detecting procedure detects "whether an error is contained within said BIOS memory" when determining whether the third device has failed. This statement makes one believe that the error detection of BIOS is performed during the error detection of the third device. Therefore, claim 12 has been amended to recite "an error instruction" in lieu of "an error", indicating that when the third device fails, an "error instruction" is detected rather than the "error" in the BIOS memory. Thus, a BIOS error is not detected when the third device is tested for a possible error.

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The withdrawal of the rejection of claim 12 under 35 U.S.C. § 112, second paragraph is respectfully requested.

Claim Rejections - 35 U.S.C. § 103

Claims 1-3, 5, 7-9 and 13

Claims 1-3, 5, 7-9 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,327,435 (Warchol) in view of U.S. Patent No. 5,012,514 (Renton) and U.S. Patent No. 5,630,142 (Crump et al.).

The present invention, as recited in claim 1, is a method for identifying a failed device in a computer. A basic input-output system (BIOS) memory having a plurality of memory locations containing data values representing a series of computer program instructions is used to test a device in the computer and determine whether an error resides in the BIOS memory. A predetermined one of the memory locations contains an error detection value based on the data values in the remaining memory locations of the BIOS memory.

Regarding claim 1, the Examiner asserts that Warchol discloses a processor including a serial port reads processor module diagnostic test instruction from a PROM in a serial line controller through the serial port by way of a serial bus in response to power-up reset instructions, and that an apparatus and a method for indicating module failures in a computer system are provided. A console panel is provided in the computer system comprising LEDs visible to the user, each LED corresponding to a particular module. Any LED which remains lit indicates the failure of the corresponding module. However, Warchol does not disclose that the memory is a BIOS memory.

Although the Examiner asserts that a BIOS memory is used in Renton, it is not reasonable to incorporate Warchol with Renton for alleging that the present error-detecting method is disclosed by the combination of these two patents. The purpose of Renton is to provide a hard drive security system which prevents an unauthorized access to the hard drive of a personal computer system. The purpose of the BIOS used in Renton is to search for BIOS extension ROMs, which is far different from that of the BIOS in the present application.

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The cited prior art fails to teach or suggest a BIOS memory that has a plurality of memory locations containing data values representing a series of computer program instructions for testing a device in the computer and for determining if an error resides in the BIOS memory, wherein a predetermined one of the memory locations contains an error detection value based on the data value in the remaining memory locations of the BIOS memory (see page 3, lines 22-25). Obviously, the BIOS used in the present application contains computer program instructions by which the system detects whether or not an error resides in the RAM, the BIOS memory, or the display adapter in a sequence. Moreover, owing to the usage of the BIOS memory, the error-detecting procedure starts upon the system being booted. Thus, the system executes the error detection immediately after the system resets. This is the advantage of the usage of BIOS memory as storage of program instructions that one does not have to wait until the operation system is initiated. Therefore, a fast error detection result is reported due to the usage of BIOS memory, and this indeed is a progress brought by the present application.

Regarding claims 2 and 7, the step of detecting is further defined as comprising a step of identifying a type and an identification of said first device in said computer by means of said BIOS memory. However, the Examiner relies on the disclosure on line 19, column 3 of Warchol that states:

"according to a further aspect of the invention, an apparatus and a method for indicating module failures in a computer system is provided. Broadly stated, this aspect of the invention operates in a computer system comprising one or more CPU modules, an I/O module, and one or more memory modules. A console panel is provided in the computer system comprising LED's visible to the user, each LED corresponding to a particular module. Any LED which remains lit indicates the failure of the corresponding module."

Warchol discloses a "computer system comprising one or more CPU modules, an I/O module, and one or more memory modules" but does not suggest or teach identifying a type and an identification of a first or second device during a step of detecting a first or second device. Therefore, it is obvious that the portions of Warchol cited by the Examiner are irrelevant to the features recited by claims 2 and

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7 of the present invention.

Regarding claims 3, 5, 8, 9 and 13, since the prior art of record does not teach or suggest the features recited in independent claim 1 for the reasons presented above, the dependent claims 3, 5, 8, 9 and 13 are also believed to be patentable.

The withdrawal of the rejection of claims 1-3, 5, 7-9 and 13 under 35 U.S.C. 103(a) is respectfully requested.

Claims 4, 6 and 10-12

Claims 4, 6 and 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Warchol, Renton and Crump et al. as applied to claims 1, 5 and 9, and further in view of "How a Computer Wakes Up" by White. Since the prior art of record does not teach or suggest the features recited in independent claim 1 for the reasons presented above, the dependent claims 4, 6 and 10-12 are also believed to be patentable.

The withdrawal of the rejection of claims 4, 6 and 10-12 under 35 U.S.C. 103(a) is respectfully requested.

Claims 14-19

The present invention, as recited in claim 14, is a device for displaying a message indicative of a failed device in a computer. The device includes a single luminescent display, a decoding element and a BIOS memory having a plurality of memory locations containing data values representing a series of computer program instructions used to test a hardware device in the computer. The BIOS memory sends out a control signal based on the results of the test, and the decoding element receives the control signal and outputs a control signal to the luminescent display causing it to blink at a frequency associated with the control signal.

Claims 14-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Warchol in view of Crump et al.

Regarding claim 14, neither the claimed BIOS memory nor the decoding

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element is disclosed by Warchol or Crump et al. The claimed BIOS memory has a plurality of memory locations containing data values representing a series of computer program instructions for testing a hardware device in the computer, wherein a predetermined one of the memory locations contains an error detection value based on the data value in the remaining memory locations of the BIOS memory, (see page 3, lines 22-25). Obviously, the BIOS used in the present application contains computer program instructions by which the system detects whether or not an error resides in the RAM, the BIOS memory, or the display adapter in a sequence. Moreover, owing to the usage of the BIOS memory, the error-detecting procedure starts upon the system being booted. This results in the error detection being executed right after the system resets. The advantage of using the BIOS memory as storage of program instructions is that the operation system is initiated without an undesired delay. Therefore, a fast error detection result is reported due to the usage of BIOS memory. Furthermore, neither Warchol or Crump et al. disclose any device which corresponds to the decoding element.

Since the prior art of record does not teach or suggest the features recited in independent claim 14 for the reasons presented above, the dependent claims 15-19 are also believed to be patentable.

The withdrawal of the rejection of claims 14-19 under 35 U.S.C. 103(a) is respectfully requested.

Claim 20

Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Warchol and Crump et al. as applied to claim 14, and further in view of "How a Computer Wakes Up" by White. Since the prior art of record does not teach or suggest the features recited in independent claim 14 for the reasons presented above, the dependent claim 20 is also believed to be patentable.

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The withdrawal of the rejection of claim 20 under 35 U.S.C. 103(a) is respectfully requested.

Conclusion

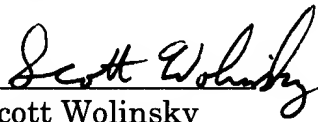
For the foregoing reasons, it is respectfully submitted that the cited references do not disclose, suggest, or render obvious the claimed invention. Accordingly, the claims 1-20 are patentable over cited references.

Because claims 1-20 are believed to be allowable for the reasons provided above, a timely issued Notice of Allowance is respectfully requested.

If the Examiner does not believe that the claims are in condition for allowance, the Examiner is respectfully requested to contact the undersigned at 215-568-6400.

Respectfully submitted,

Johnson Lin

By 
Scott Wolinsky
Registration No. 46,413
(215) 568-6400

Volpe and Koenig, P.C.
United Plaza, Suite 1600
30 South 17th Street
Philadelphia, PA 19103

SW/GBH/ccw